



UNITED STATES DEPARTMENT OF COMMERCE
Patent and Trademark Office
ASSISTANT SECRETARY AND COMMISSIONER OF
PATENTS AND TRADEMARKS
Washington, D.C. 20231

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Paper No. 17

Application Number: 08/923,369

Filing Date: 9/3/97

Appellant(s): Koike et al.

MAILED

APR 13 2000

Group 2700

EXAMINER'S ANSWER

This is in response to appellant's brief on appeal filed

1/24/2000.

(1) Real Party in Interest

A statement identifying the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) Status of Claims

The statement of the status of the claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

Art Unit: 2712

(5) Summary of Invention

The summary of invention contained in the brief is correct.

(6) Issues

The appellant's statement of the issues in the brief is correct.

(7) Grouping of Claims

Appellant's brief includes a statement that claims 10-16 and 21-27 stand or fall together and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

Appellant's brief includes a statement that claims 28-30 do not stand or fall together with claims 10-16 and 21-27 and provides reasons as set forth in 37 CFR 1.192(c)(7) and (c)(8).

(8) ClaimsAppealed

The copy of the appealed claims contained in the Appendix to the brief is correct.

(9) Prior Art of Record

The following is a listing of the prior art of record relied upon in the rejection of claims under appeal.

✓, 164,839	Lang	11/17/1992
✓, 715,104	Takada et al.	02/03/1998
✓, 475,498	Radice	12/12/1995

Art Unit: 2712

(10) *Grounds of Rejection*

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(a) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

2. Claims 10-16 and 21-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lang (US 5,164,839) in view of Takada et al. (US 5,715,104).

Regarding claims 10-12, 15-16, 21 and 24 Lang discloses in Fig. 2, a video data recording and reproducing system for editing a source of video data (see col. 2, lines 29-38), said system comprising: a video tape recording means (see col. 3, lines 51-53, "...AVRU 11 may be a VCR...") for recording onto a tape medium with a first data rate ("real time input rate, from one of the sources").

Lang further discloses a disc recording means (see col. 6,

Art Unit: 2712

lines 28-42), editing means and control means for controlling the Disc and VTR, functions such as recording from an external source, internal transfers, reproducing to various external unit mediums etc., editing internally and/or in combination with an external source, thereby controlling reproduction operation such as editing portions designated by an editing operation by the user thru user interface(see Fig. 1, control panels, switches or user interface controls etc.), reproduction/transmission, compression and format conversion {such as to RGB etc.} of received video and editing and handling of audio(see col. 1-2 and col. 5, line 40 to col. 8, line 59).

Note: "VCR-ET" is shown in Fig. 1, comprising elements, such as, shown in Figs. 1 A and 2-4 and is the editing system or unit itself.

It is clear **in the digital environment**, Lang can provide high speed input/output of information to and from VCR-ET-10 as seen in Fig. 1, and discloses the utilization of a conventional VCR or video tape recording means, being an analog VCR.

Lang discloses an AUX Digital Input-17 in Fig. 2, to the high speed data bus and further discloses the ability to transfer information to and from the high speed bus at high transfer rates.

Art Unit: 2712

Lang, fails to clearly and specifically describe wherein the video tape recording apparatus or VCR and associated tape medium is capable of transferring recorded information at high speed or higher than a real time rate to the disc recording means and vice versa.

It is clear that, due to the limitation of the A/D conversion process, for converting analog video signals to digital in the era of Lang(1988), that commercially available high speed A/D converters can be provided, but the disclosure only associates 30 frames/sec transfers from the analog VTR-AVRU-11 to the disc recording means-13(see col. 4, line 64 to col. 5, line 15).

Lang further discloses that the recording and reproducing means, AVRU-11, can be a digital recording and reproducing unit(see col. 3, line 61 to col. 4, line 43), thereby transferring video and/or audio in digital form to and from the digital AVRU-11, and clearly suggests utilization of alternate storage apparatuses and media.

Takada et al., teaches in Fig. 3, an apparatus performing the process of high speed dubbing, utilizing a D-VTR(see Abstract and col. 3, lines 1-4), wherein the digital signals are in digital form(see Fig. 3, and col. 15, lines 1-35, digital signal dubbing input and output) and further discloses controlling by

Art Unit: 2712

providing synchronization signals, from one unit, being a master reproducing unit, to a recording unit being a slave recorder, for performing dubbing at N fold speed reproduction and recording or high speed dubbing (see col. 16, lines 20-59).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention was made to modify Lang by replacing the "AVRU-11 being a conventional analog VCR associated with media-23", with, "the digital tape recording apparatus and associated tape medium, having advantages of providing higher transfer rates or high speed dubbing N fold speeds as taught by Takada et al., thereby decreasing the amount of time required to transfer video and/or audio from tape recording and reproducing means or the AVRU-11 replaced with the high speed VTR, to the disc recording and reproducing means or memory unit-13 and vise versa, from the disc to the tape in any N-fold speed configuration to and from the two recording and reproducing means etc. (Tape and Disc of Lang).

Regarding claims 13, 22 and 25 and the combination applied meets the limitations of the first operation mode, for recording and reproducing in the first data rate and second data rate (N-fold speed and high speed transfers), between the disc and VTR and vise versa, wherein the editing means or controller (see CPU, controller and ROM unit-14 in Fig. 2).

Art Unit: 2712

Regarding claims 14, 23 and 26, the combination of Lang and Takada et al. further meet the limitation of a transfer means (see Fig. 2, "High Speed Bus-34") for transferring the reproduced video data from the tape recording means (Takada et al.), and said edited video data reproduced from the disc recording means.

Regarding claim 27, the combination further discloses, a video interface circuit for receiving said source video data (see Fig. 2); and a digital interface circuit for outputting edited video data (see Fig. 2, from Bus-34 to Audio/Video Tran/Rec. unit-22).

3. Claims 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over the combination of Lang (US 5,164,839) and Takada et al. (US 5,715,104) as applied to the claims above and further in view of Radice (US 5,475,498).

Regarding claims 28-30, the combination of Lang and Takada et al. fail to disclose the utilization of buffering of video and/or audio data to and from the VTR and Disc recording and reproducing units of the editing system or an input and output buffers, coupled to the VTR and Disc and associated buffer control means.

Radice, teaches the utilization of a video recorder interface unit (see Fig. 1, "record interface-12") for controlling and performing a buffering, or a memory unit and controller for

Art Unit: 2712

performing buffering (see Fig. 2, "memory-36", and associated control circuitry, "control circuitry-50" and associated elements 52, 44 and 38) for inputted as well as outputted data to and from a digital video recorder (VTR etc.) for facilitating desired high speed transfers to and from (see Fig. 1 and 2) having the advantage of allowing a digital video recorder to function as a universal data recorder (see col. 2, lines 31-44), wherein the digital video recording unit is controlled based on capacities of the input output buffering means (see col. 5, line 33 to col. 6, line 67).

Therefore, it would have been obvious to one skilled in the art at the time of the invention to modify the combination of Lang and Takada et al. by incorporating buffering for the VTR means and Disc means for inputting and outputting video and/or audio data to and from the VTR and disc recording/reproducing means (being digital recorders) as taught by Radice having advantages of enabling a digital video recorder to function as a universal data recorder by utilization of the interface apparatus and further controlling the buffer fullness by controlling the speed of reproduction of the reproduction unit so that the buffer never runs out or over-fills, and to output data at the specified rate such as 1 X, 2 X (see Radice, col. 3, lines 12-37).

Art Unit: 2712

(11) Response to Argument

{A} In re pages 7 and 9, appellant states, in summary, "In response, it is respectfully submitted that the Examiner's rejection is erroneous and fails to make a *prima facie* showing of obviousness. Furthermore, the examiner must meet three basic criteria(see MPEP 2143), {1} motivation, {2} a reasonable expectation of success and {3} teach or suggest all claim limitations.

In response to applicant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992).

In this case, independent claims 10-11 and 16, have been rejected as being unpatentable over Lang in view of Takada et al..

As analyzed and discussed, the examiner, interpreted the limitation of the video tape recording means to be the recited,

Art Unit: 2712

conventional video tape recorder(see Lang, col. 3, lines 51-58), as interpreted being conventional, therefore in the era, an analog VTR/VCR unit, as is well known to those skilled in the art.

Therefore, as recited in the last office action, "Lang fails to clearly and specifically describe wherein the video tape recorder is capable of transferring recorded information at high speed or higher than a real time rate to the disc recording medium", being a digital device(memory element 13), in view of the passage, associated with the era(date) of Lang(col. 4, line 64 to col. 5, line 5).

The examiner with respect to Lang's disclosure, determined that the A/D conversion process is the limiting factor as taught by Lang, therefore, only capable of handling video conversion rates up to "30 frames/sec.", which clearly is the frame rate of NTSC video. However, Lang fails to teach higher than real time, due to the limitation of the A/D conversion process in that era capable of handling only 30 frames/second.

Furthermore, the claims fail to recite whether the VCR is an analog or digital, but in view of appellant's specification and drawings(see Fig. 1, VTR 12 is digital, also see page 11, line 19-25, "a digital format with respect to the video tape 10" and

Art Unit: 2712

"having two operational modes normal and high speed recording and reproduction"), it appears that the VCR is, indeed, digital.

Takada et al., teaches utilization of a Digital VTR with the capabilities of providing high speed dubbing, as is well known in the art (see Title and Abstract, Fig. 3), and at col. 14, lines 14-67, "high speed dubbing", "insert editing", "m times the standard speed", as taught by Takada et al..

Further, the substitution of a digital recording and reproducing VTR, is considered obvious and the motivation has been clearly provided and identified above fulfilling the {first criteria}, wherein the examiner asserts, one skilled in the art at the time of the invention, would have a reasonable expectation of success in the process of implementing the substitution of the digital VTR for the conventional analog VTR {second criteria}.

The examiner asserts, that a skilled artisan in the art would have had no trouble in the process of implementing by connecting to the digital video signal control and video, audio cables etc. of Lang to implement the substitution, in order to thereby provide the feature of transferring digital video signals from the substituted digital VTR to memory element 13 (which may be a Disc type), in order to perform high speed transfers between the Disc and VTR devices.

Art Unit: 2712

Wherein the third criteria is met, to "teach or suggest all claim limitations", the combination teaches and suggests the means to perform functions of wherein the VTR records at a first data rate(real time 30 frames/sec) and can reproduce either at first data rate or higher data rate(2 x etc.) than the first data rate, thereby providing normal and high speed transfers between the designated recording (VTR or Disc) and reproducing apparatuses(Disc or VTR), furthermore, the disc also can provide recording and reproduction at a normal or higher data rate.

{B} In re pages 7-8, appellant states, in summary, the combination of Lang and Takada et al., fail to teach all claim limitation,(claim 10, 11 and 16), "wherein said editing means...controls said recording operation of the video tape recording means..." and "Lang fails to teach or suggest that commands may also be delivered to control the recording operation of the device connected...".

In response the examiner fails to agree. The recited editing means is interpreted as, Lang's system as shown Figs. 1, 1 A, 3, "editing unit with user inputs", Fig. 2, "user input 14 and controller 27", Fig. 4, "editor 86". The system in Figs. 2-3, comprises controller 27, see, col. 5, lines 40-43, "handles timing and aids in the communication between elements...and between VCU 12, AVRU 11 and memory 13". Lang @ col. 6, lines 46-

Art Unit: 2712

52, further discloses, "Digital Control Unit (DCU) 14 comprises a CPU (Central Processing Unit) 31, a ROM (Read Only Memory) 32 and a controller 32. DCU 14 is responsible for all of the digital editing processes. Through the use of DCU 14, video segments may be edited and re-arranged etc.. Wherein the DCU 14 may comprise a flat panel display and provide a menu on a display and can display a strip of frames before and after a selected frame, thereby providing a graphical user interface with menu options (see col. 6, lines 53 to col. 7, line 9 etc.). The user input devices may comprise, "light pen or mouse" for deleting, editing frames, adding audio to video, adjusting contrast, brightness, sharpness of frames etc.), one skilled in the art needs no more disclosure.

Furthermore, in view of Fig. 1, a housing, housing the VTR, Disc, controller, memory etc., having keys for controlling recording reproduction and transferring of the audio, video etc., the system or the editing means...controls said recording operation of the video tape recording means in the housing and other elements in the housing with one the plurality of different optional user interfaces provided, as disclosed by Lang. Clearly Lang can control the VTR apparatus in the housing of the unit. {C} In re page 8, appellant states, "Lang fails to teach or suggest that commands may also be delivered to control the

Art Unit: 2712

recording operation of the device connected to the fiber optic line(i.e. Takada et al. tape device)" and "The only connection to Takada et al., both as set forth by the examiner and as disclosed by Takada's as understood, is Lang's fiber optic port 18".

In response the examiner had never contemplated, the connection to Takada et al. tape device, would be thru "a fiber optic line provided". The examiner fails to understand this particular argument and considers the argument to be without merit and erroneous.

In review of the last office action, the examiner rejection contemplates the obviousness based on the replacement or substitution of a Digital VTR with the conventionally disclosed analog unit.

The examiner, had never suggested a connected thru a fiber optic lines internally, between the VTR and Disc devices. Furthermore, one skilled in the art understands the advantages associated with a connection thru "fiber optic" which provides low loss over long distances(more than a few feet in distance, such as miles of distance) and also wherein noise injection becomes a problem due to environment, as is well known in the art.

{D} In re page 9, appellant states, in summary a conclusion, based on a statement by the examiner, "high speed A/D converters

Art Unit: 2712

can be provided", that the examiner has not shown the motivation associated therewith.

In response the examiner merely recited that, it is known and conventional in the era of appellant's filing date that A/D and D/A conversion processing can be done at higher rates. One skilled in the art is well aware of the technological studies in processing speeds that have been taken place between the publishing data of Lang and the filing date of this application.

Further there is no contemplation of a modification for combining high speed D/A or A/D converters, and therefore, no motivation was provided.

{E} In re page 9, appellant states, "However, Lang discloses a "MEMORY 13, not a disc recording means 13. The examiner has failed to state that it would be obvious to replace Lang's memory with a disc.".

In response the examiner cites Lang, col. 6, lines 28-42, "Different types of memory technologies are adapted for use in memory 13. As mentioned earlier, DRAM and SRAM semiconductor memories are commonly used in applications of this type and are readily available.

One type of random access memory is CMOS (Complimentary Metal Oxide Semiconductor). The CMOS memory has the advantage of a reliable low power requirement and is readily adaptable for use

Art Unit: 2712

of batteries backup for semipermanent data storage. Other types of memory include the above mentioned **optical disc memories, magnetic disks**", etc., as interpreted, Lang in view of what is disclosed, clearly anticipates, utilization of digital recording mediums such as the optical and magnetic disk/disc memory, wherein no motivation is provided, therefore all later statements associated with the obviousness to combine, are considered moot.

{F} In re page 11-12, appellant states, "The examiner has failed to show how Radice discloses input buffering from a tape, output buffering from a disc and input buffering from a disc.".

In response, the examiner has cited Radice, associated with recording data having a first data rate to a digital video recorder, wherein an interface with buffering is provided for enabling, "a Digital Video Recorder", to function as a universal data recorder(abstract), thereby controlling the data rate of the video.

Radice, further teaches at col. 4, lines 23-29, "Those skilled in the art will appreciate that future video recorders may utilize data storage media other than magnetic tape, and all such alternatives are intended to fall within the scope of the present specification and claims.", therefore, this interface used in a universal digital video recorder, which may be

Art Unit: 2712

alternate recording media such as Disk/Disc media etc., as is well known to those skilled in the art.

Therefore, as recited Radice, teaches using a buffer type interface in a digital recording and reproducing device for controlling the data rate in and out of the interface, from the recording device and, therefore as asserted by the examiner, the interface is a bridge that can be between digital video recording and reproducing devices and can accommodating a wide range of data rates (see col. 5, lines 55-56), as taught by Radice.

Therefore, as analyzed and discussed buffering can be provided between devices with the interface and further control of the data rate can be accomplished, as taught by Radice and can be associated with media other than tape, as is well known in the art, and as taught by Radice.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

V.F.B.
April 10, 2000

2001 Ferry Building
San Francisco, CA 94111

Wendy Garber
Wendy Garber
Supervisory Patent Examiner
Technology Center 2700